International Journal of Gerontology 5 (2011) 177–179

Contents lists available at SciVerse ScienceDirect

International Journal of Gerontology

journal homepage: www.ijge-online.com

Case Report

Obturator Hernia in an Elderly Woman Presenting with Aspiration Pneumonia and Respiratory Failure☆

Jia-Ming Wang[1], Po-Chou Lin[1], Wei-Chan Lin[2], Jiun-I Lai[1], Yi-Chun Lai[1], Shih-Chieh Chang[1]*

[1] Department of Internal Medicine, National Yang-Ming University Hospital, [2] Department of Radiology, National Yang-Ming University Hospital, Taiwan

ARTICLE INFO

Article history:
Received 28 March 2010
Received in revised form
16 July 2010
Accepted 11 August 2010
Available online 27 November 2011

Keywords:
aspiration pneumonia,
intestinal obstruction,
obturator hernia,
respiratory failure

SUMMARY

Obturator hernia is a rare but important cause of intestinal obstruction. The mortality rate is high if the diagnosis is not made early and surgical intervention is delayed. We report an 88-year-old female patient who presented with aspiration pneumonia and respiratory failure. She did not have nausea/vomiting and physical examination was unremarkable. She was fed through a nasogastric tube, but no gastric emptying was noted. An abdominal/pelvic computed tomograpy (CT) scan performed 5 days after the presentation revealed a left incarcerated obturator hernia. Emergency laparotomy was performed and the patient eventually recovered. This case reminds us that aspiration pneumonia may be the presenting feature of obturator hernia and a clue to its early diagnosis.

1. Introduction

The obturator foramen is formed by the rami of the ischium and the pubis, and covered by the obturator membrane. The obturator canal, containing the obturator nerve and vessels, is an opening in the superior-lateral part of obturator foramen. Obturator hernia occurs when the intra-abdominal contents pass through the obturator canal and is a rare form of hernia. It has been reported to account for between 0.05% and 0.14% of all hernias and between 0.2% and 1.6% of all cases of small bowel obstruction[1,2].

In more than 99% of patients[1], obturator hernia presents with intestinal obstruction, which causes abdominal pain, nausea and vomiting. Obturator neuralgia, which extends from the groin to the anteromedial aspect of the thigh and knee, is also an important presenting complaint.

We here report a case of obturator hernia that, presenting with aspiration pneumonia and respiratory failure, was diagnosed by abdominal/pelvic computed tomograpy (CT) scan, and treated by surgery 5 days after the presentation. The presentation of our patient is different from that of most cases of obturator hernia.

2. Case report

An 88-year-old female had a past history of surgery for left femoral fracture 10 years previously and right femoral fracture 8 years previously, and had been bed-ridden since sustaining the right femoral fracture. She had been discharged from our chest medical ward 2 days prior to this admission, with the diagnosis of aspiration pneumonia. On the day of this admission, our patient developed severe shortness of breath after choking while having dinner. She was sent to our emergency department, and intubated for impending respiratory failure. Much food debris was noted during suction, and chest CT showed pneumonia in the left lower lung (Fig. 1).

The patient was then admitted to the intensive care unit, where she was initially given empirical antibiotic therapy with levofloxacin and later switched to piperacillin/tazobactam. No nausea or vomiting was noted and her abdomen was soft without tenderness, but with hypoactive bowel sounds on examination. She was fed through a nasogastric tube, but no gastric emptying was noted. An abdominal plain film showed no significant gaseous distension of the bowel loops. Metoclopromide injection was prescribed for 5 days, but the patient's condition did not resolve.

An abdominal/pelvic CT scan performed on day 6 of her admission revealed dilated small bowel loops in the abdomen, and incarcerated small bowel loop at a left obturator hernia (Fig. 2). Emergency surgical intervention was implemented. During

☆ All contributing authors declare no conflict of interest.

* Correspondence to: Dr Shih-Chieh Chang, Department of Internal Medicine, National Yang-Ming University Hospital, 152 Xin-Min Road, Yilan City 260, Taiwan.
E-mail address: dtsurga9@yahoo.com.tw (S.-C. Chang).

1873-9598/$ – see front matter
doi:10.1016/j.ijge.2011.08.005

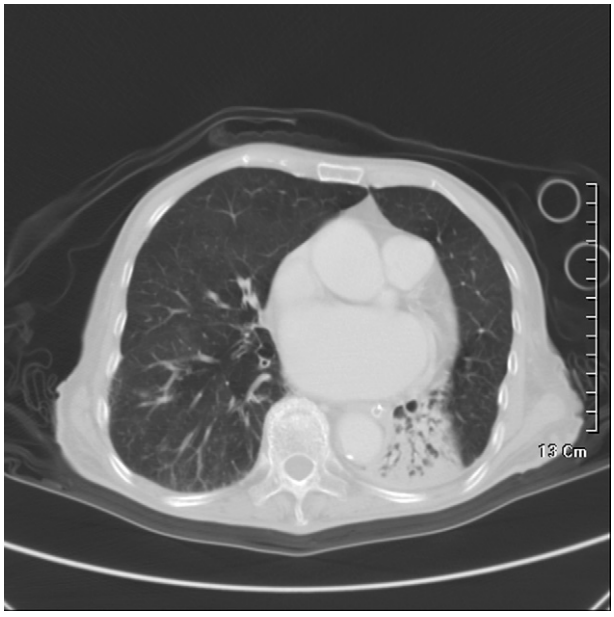

Fig. 1. In this patient presenting with aspiration pneumonia, computed tomography (CT) of the chest revealed left lower lobe pneumonia.

operation, a loop of the small intestine was found to be incarcerated into the left obturator foramen and showed gangrenous change and perforation. The gangrenous segment of the small bowel was resected with end-to-end anastomosis and hernioplasty performed. Our patient began to tolerate enteral feeding 7 days after the operation (day 12 of her admission) and thereafter was weaned from mechanical ventilation. She was discharged without significant complication after 25 days' hospitalization, and no recurrent pneumonia was observed during follow-up for 1 year.

3. Discussion

Obturator hernia occurs most commonly in elderly, emaciated women as a result of loss of the protective fat pad around the obturator nerve and vessels in the obturator canal. Women have a wider pelvis and obturator foramen, and may have relaxed pelvic muscles after multiple pregnancies, and hence are affected about six to nine times more often than men[3]. Our patient, an 88-year-old emaciated female, weighing only 32.5 kg, was a prime candidate for the diagnosis of "little old lady's hernia".

Obturator hernia is an infrequent type of hernia that represents 0.073% of all hernias; it is responsible for 0.02% of small intestinal obstructions that require surgical treatment[2], and approximately two-thirds of patients are diagnosed at exploratory laparotomy performed for intestinal obstruction[4,5]. Early diagnosis of this relatively rare condition is of great importance because associated morbidity and mortality are common, especially in elderly patients[6].

Accurate diagnosis is seldom established by physical examination. The Howship–Romberg sign refers to pain along the medial thigh and knee, and sometimes in the hip caused by compression of the obturator nerve by the hernia sac. Flexion of the affected thigh usually relieves the pain, while extension, adduction, or medial rotation of the hip may aggravate it. This sign is reported to be present in 25–50% of patients[1,7]. However, it is often ignored or misinterpreted because of associated hip disorders. Another possible sign of obturator hernia is the Hannington-Kiff sign, characterized by an absent adductor reflex in the affected thigh, resulting from obturator nerve compression, in the presence of a positive patellar reflex[8].

Delayed diagnosis of obturator hernia is not unusual—because of the invisibility of a hernia sac from outside the body, non-characteristic symptoms and signs, and lack of suspicion—and postponed surgery of obturator hernia may result in significant morbidity and mortality[8]. Several imaging modalities have been described as helping to establish the diagnosis, including barium enema fluoroscopy, ultrasonography, herniography, and computed tomography[9], while an abdominal/pelvic CT scan has been shown to contribute to definite and early diagnosis with awareness of the clinical courses of this hernia[10]. Recent series have reported that definite and early diagnosis of the obturator hernia can be made in 100% of cases with CT of the abdomen and pelvis[6].

Our patient presented mainly with aspiration pneumonia and respiratory failure. No obvious abdominal pain or tenderness was noted during her two hospital admissions. Abdominal CT scan was performed 5 days later after she presented, and gangrene and perforation of the incarcerated intestine were noted during the emergency operation.

Fig. 2. An abdominal/pelvic CT scan in the same patient revealed left obturator hernia (white arrow).

4. Conclusions

This case reminds us that aspiration pneumonia may be the presenting feature of obturator hernia, and a clue to its early diagnosis. Although pneumonia is not a main manifestation of small intestinal obstruction, it is an important complication, especially during the post-operative period.

The prognosis of obturator hernia is good if there is early diagnosis and surgery, with about 10% mortality and a low recurrence rate. However, delayed diagnosis and surgery may result in high morbidity and mortality. Recurrent aspiration pneumonia in an elderly, emaciated and bed-ridden patient should alert us to the possibility of intestinal obstruction caused by obturator hernia.

References

1. Lo CY, Lorentz TG, Lau PW. Obturator hernia presenting as small bowel obstruction. *Am J Surg.* 1994;167:396–398.
2. Ziegler DW, Rhoads JE Jr. Obturator hernia needs a laparotomy, not a diagnosis. *Am J Surg.* 1995;170:67–68.
3. Bjork KJ, Mucha P Jr, Cahill DR. Obturator hernia. *Surg Gynecol Obstet.* 1988;167:217–222.
4. Kammori M, Mafune K, Hirashima T, et al. Forty-three cases of obturator hernia. *Am J Surg.* 2004;187:549–552.

5. Schmidt PH, Bull WJ, Jeffery KM, et al. Typical versus atypical presentation of obturator hernia. *Am Surg*. 2001;67:191–195.
6. Mantoo SK, Mak K, Tan TJ. Obturator hernia: diagnosis and treatment in the modern era. *Singapore Med J*. 2009;50:866–870.
7. Gray SW, Skandalakis JE, Soria RE, et al. Strangulated obturator hernia. *Surgery*. 1974;75:20–27.
8. Nakayama T, Kobayashi S, Shiraishi K, et al. Diagnosis and treatment of obturator hernia. *Keio J Med*. 2002;51:129–132.
9. Chang SS, Shan YS, Lin YJ, et al. A review of obturator hernia and a proposed algorithm for the diagnosis and treatment. *World J Surg*. 2005;29:450–454.
10. Ijiri R, Kanamaru H, Yokoyama H, et al. Obturator hernia: the usefulness of computed tomography in diagnosis. *Surgery*. 1996;119:137–140.